

CLAIMS

What is claimed is:

- 5 ~~1.~~ A method for encoding signals in a Code Division Multiple Access communication system comprising:
- (a) encoding a first communication signal with a first pseudorandom noise (PN) sequence;
  - (b) generating an exhaustive list of other PN sequences of the same length as the  
10 first PN sequence;
  - (c) selecting, from the exhaustive list, a subset of PN sequences that have a lowest possible cross correlation with the first PN sequence; and
  - (d) encoding a second communication signal using a selected one of the PN  
15 sequences from the subset having lowest possible cross correlation.
2. A method as in claim 1 wherein step (a) additionally comprises:
- (i) Walsh encoding a first input signal;
  - (ii) modulating the Walsh encoded first input signal with the first PN  
20 sequence.
3. A method as in claim 1 wherein step (d) additionally comprises:
- (iii) Walsh encoding a second input signal;
  - (iv) modulating the Walsh encoded second input signal with the  
25 selected one of the PN sequences from the subset.
4. A method as in claim 1 wherein step (b) additionally comprises:
- (v) correlating the first communication signal with other PN signals  
30 encoded with selected one of the other PN sequences of the same length as the first PN sequence.

- [illegible]